

# Shaggy Aorta Assessment with Intravascular Ultrasound prior to Fenestrated and Branched Endovascular Aortic Aneurysm Repair

UT Southwestern  
Medical Center

Mira T. Tanenbaum MD, Marilisa Soto Gonzalez MD, Andres V. Figueroa MD, Jose Eduardo Costa Filho MD, Mirza S. Baig MD, Carlos H. Timaran MD.

Division of Vascular and Endovascular Surgery, Department of Surgery, UT Southwestern Medical Center, Dallas, TX

## Background

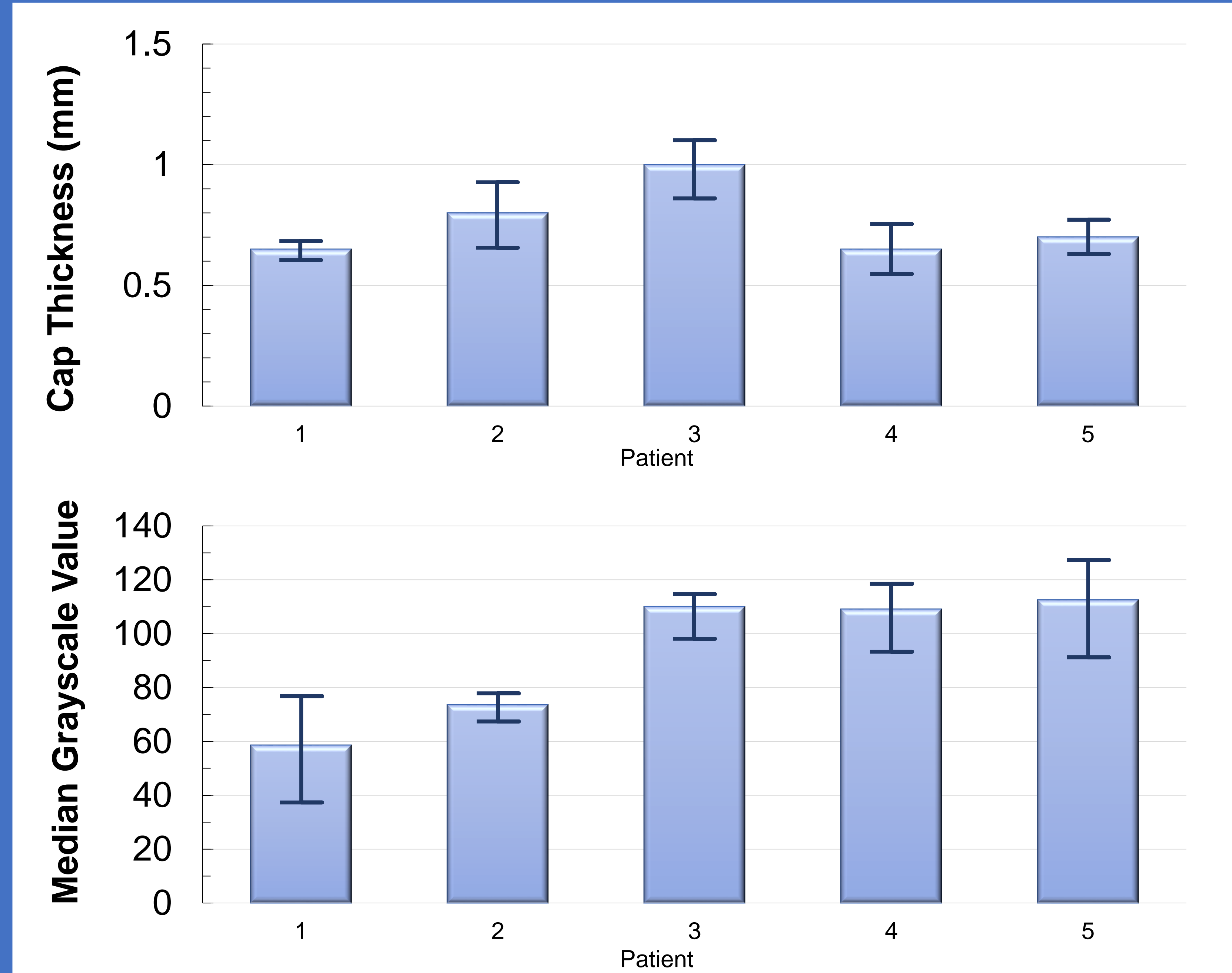
- Shaggy aortas pose significant challenges for fenestrated-branched endovascular aortic repair (FBEVAR) with high risk of technical failure and embolic events
- IVUS has been used to assess plaque in carotid & coronary arteries to predict adverse embolic events
- Case series evaluating the utility of IVUS in patients with shaggy aortic disease undergoing FBEVAR



## Demographics & Outcomes

Variables	FBEVAR in shaggy aorta (n=5)
Age, years	74 ± 1.5
Gender, female	5 (100%)
Hypertension	5 (100%)
Hyperlipidemia	5 (100%)
Smoking history	5 (100%)
Preoperative statin therapy	5 (100%)
Preoperative aspirin therapy	3 (60%)
Median maximum aneurysm diameter, mm	63 (53 - 63)
Technical Success	5 (100%)
Embolization Events	0 (0%)
Median follow-up, days	42.5 (31.5 - 351.75)
Target vessel patency	5 (100%)

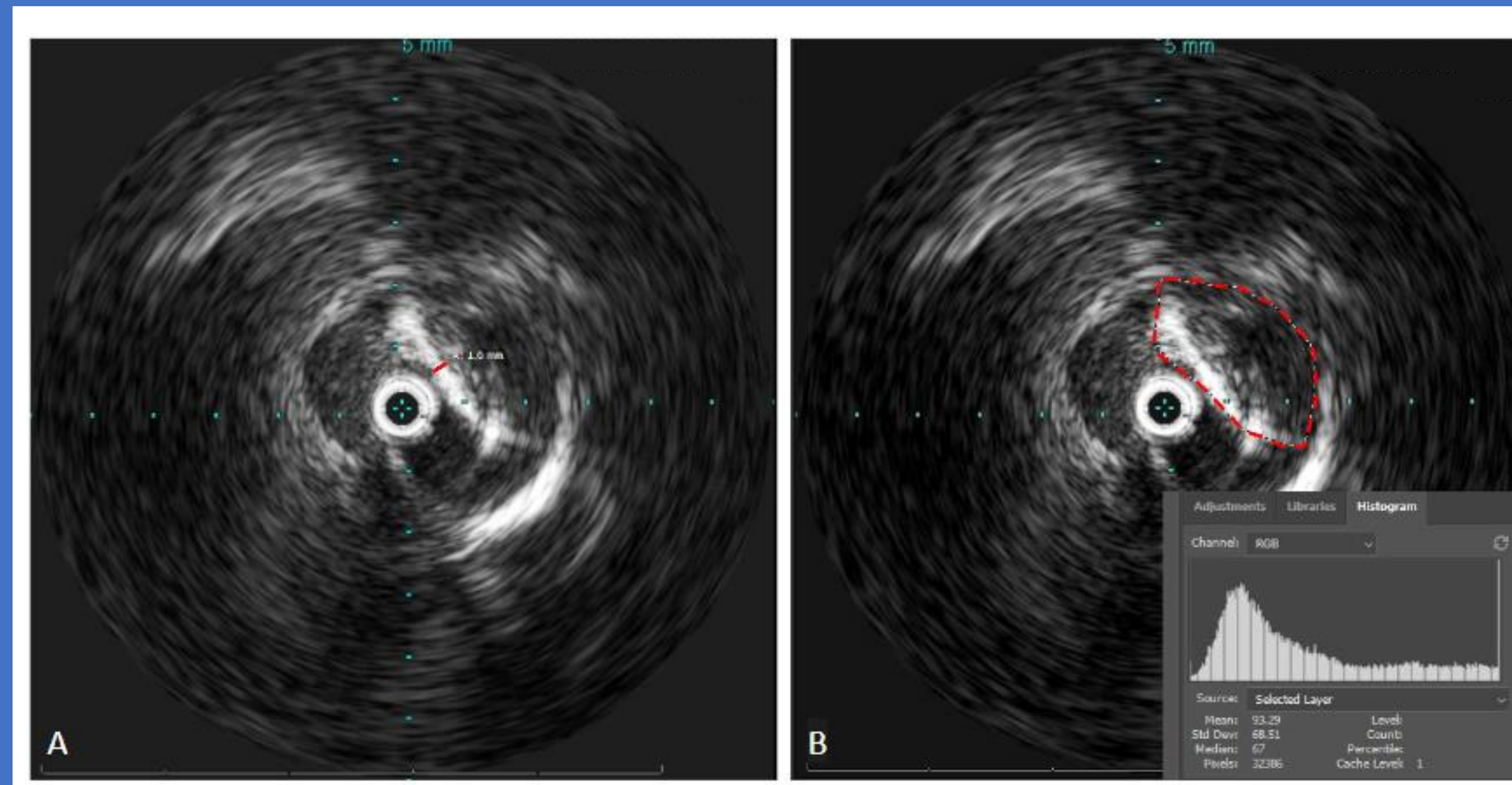
## Plaque Analysis



## Methods

- Retrospective review of FBEVAR procedures in shaggy aortas between 2018-2023
- IVUS used to assess aortic plaque cap thickness & median grayscale values
- Endpoints:
  - Technical success
  - Embolization events
  - Target vessel patency

## IVUS Imaging



## Conclusions

- FBEVAR in shaggy aortas is feasible
- IVUS may aid in determining safety of FBEVAR by evaluating plaque cap thickness & echogenicity
- Further studies should evaluate IVUS aortic plaque analysis as a predictor of embolic events